



Colour Laser Printers

With prices dropping below £200, the speed and flexibility of colour laser printers are now within reach of home users. We test nine dynamic all-rounders designed to brighten up your day

A splash of colour does wonders for the average office document, making charts and spreadsheets easier to understand and breaking the monotony of long business reports. Colour gives a PowerPoint handout more impact, and makes a map much easier to follow.

Colour printing is great for documents printed at home, too. For a long time the price of colour laser printers has been too high for most home users. Inkjet printers may seem a reasonable alternative – they are great for printing photos

and the occasional colour document. But they also take far longer to print a page.

Luckily, the prices of colour lasers are falling. Today you can buy a colour laser printer for just under £200.

LASER QUEST

We've tested nine of the cheapest lasers around, five of which cost less than £250 including VAT, to see if they're the bargains they seem. Whether you're buying for business or pleasure, we'll help you find a well-priced way to produce perfect prints.

IN THIS REVIEW

Dell Laser Printer 3100cn
Epson AcuLaser C1100
HP Color LaserJet 2600n
Konica Minolta Magicolor 2400W
Konica Minolta Magicolor 2450
Oki C3200
Oki C5250n
Samsung CLP-510
Xerox Phaser 8500AN



CHOOSING A... COLOUR LASER PRINTER

If this is your first colour laser, you need to make sure you are getting the right specifications for your needs. Get laser sharp with our buying guide and you're sure to find your ideal printer

No matter what colour laser printer you choose, it's likely to be big, come in an even bigger box and be heavy to lift. That's where the similarities end, though. Our group of nine printers spans a range of prices, speeds and features.

Selecting the right printer for your needs can be confusing, but it needn't be. This guide explains the key technologies and differences that set our test printers apart from one another, so you can choose and buy with confidence.

PASS MASTERS

Laser printers create prints by fusing coloured toner on a blank sheet of paper. To create colour pages, they prepare separate black, cyan, magenta and yellow images, and overlap them to create a full-colour image. Under magnification it's possible to see tiny blocks of each original colour, but printers do their best to disguise them by dithering in an irregular pattern that the eye can't detect.

Most budget colour laser printers use one imaging drum and a carousel of four toner cartridges. The carousel rotates, allowing each colour in turn to be added to the image. This kind of printer, known as a four-pass laser, is relatively slow but cheap to produce. However, the components that are used four times for each page tend to wear out more quickly when you print in colour.

Single-pass engines use four separate drums, one for each colour, and run sheets of paper past each one in turn. This process is much faster, and can potentially print a colour page as fast as one containing only black. These printers usually cost significantly more than a four-pass model. However, two of the cheapest printers in this test use single-pass technology.



▲ Colour lasers are big, and you need extra space to service them. Adding paper to the Samsung printer requires room on two of its sides

COUNTING THE COST

It's easy to compare the price of each printer, but if you want to know their true cost you need to examine their consumables. Even the simplest of the printers in our group test has four toner cartridges that will need replacing, and some will require new imaging drums, too.

In the table on page 175, we've calculated how much each printed page will cost when using branded, high-yield supplies bought online. Laser printers have a reputation for being cheap to run, so we were surprised to find that all the models in our group cost more per colour page than the best inkjets.

Some products arrive with more toner than others. Our table lists how many pages you can print before you'll need to buy more. Our total ownership cost calculations take this into account.

FEEL THE NOISE

Colour laser printers are much bigger, heavier and hotter than inkjet printers. Most of the devices on test have paper cassettes that slide out from their base, and other service hatches mean that you may need to access them from all sides. Make sure you install your printer somewhere where you can access it to clear paper jams, and where none of its ventilation holes is blocked.

It's also worth considering noise, as most laser printers have loud cooling fans. This might not be a problem in the office, but it could mean you have to turn up the TV or radio at home to drown out the noise.

Though more complex than most inkjets, none of these printers was too difficult to set up. Most

come with their consumables already in place, but even these need a few bits of tape and some transit locks removing. Unusually, we had no problems installing the software for any printer in this group, even those that connect via a network port.

PAGE TURNER

A printer's specification gives you an idea of how fast it can work, but tests vary between manufacturers, so these figures can't always be compared fairly. We subject all printers to a standard set of timed tests. Epson's C1100 came commendably close to reproducing its rated speeds in our lab, but some other printers were seriously adrift.

No specification can give you a reliable idea of a printer's output quality, however. Though colour lasers can't produce photos as well as the best inkjets, we expect them all to produce dark black text with clean outlines. Colour text should be uniform and acceptably crisp, and the colours in business graphics should be broadly accurate and free of obvious dithering. Our reviews explain which printers produced the best and worst quality.

MEDIA SAVVY

It's worth considering how often you'll need to print on special media. If you frequently print on envelopes or headed paper, choose a printer with a second input so you won't have to unload your plain paper to do so. Laser printers sometimes crease envelopes, making them scruffy, and our reviews warn you if this is a problem.

Finally, think about whether your printing needs might change in the future. If you think you may need to store more paper, print on both sides automatically or connect to a network, check to see which printers can be upgraded accordingly.



▲ Xerox's solid ink system creates less waste. Unpacked, Dell's 4,000-page toner (centre) is as big as Xerox's equivalent and its packaging



Look for an adaptable laser: most of our test models will take more memory, and many have optional paper trays



KONICA MINOLTA Magicolor 2400W

RATING ★★★★★

PRICE £194 inc VAT

SUPPLIER www.misco.co.uk

DETAILS www.konicaminoltaprinters.co.uk



The Magicolor 2400W has been priced competitively since its January launch, but it's recently become the first colour laser printer to drop below £200. It's the most affordable device on test, and it doesn't lack too much in terms of specification.

Colour lasers don't tend to be compact; the 2400W is about the smallest and lightest model we tested. It's easy to lift into place and it arrives with its consumables already fitted. Konica Minolta's installation program is friendly enough for a novice. However, the driver it installs offers enough control over print jobs to keep more advanced users happy.

Like many inexpensive printers, the 2400W has some limitations. Its multipurpose paper tray accepts just 200 sheets, so you'll need to unload its paper supply if you want to print on different paper or envelopes. There are no guides to help you orientate envelopes correctly, and the printer crumples them anyway. No upgrades are available to its paper handling or memory.

The 2400W produced solid results in all our tests. Photos and business graphics had accurate shading and colours, though some colour text had blocky outlines. Black text had a soft outline, but it was noticeable only under magnification.

Konica Minolta's standard black and colour toners last for just 1,500 pages, but more useful replacements are available that should last for 4,500 pages. Using these, the running costs are acceptable. Only the Dell C3100 model is cheaper when printing in mono.

VERDICT

The compact 2400W is easy to install and use. It may not be the fastest printer on test, but it doesn't lag too far behind the competition, and makes up for it with decent print quality and running costs. Konica Minolta is offering a three-year onsite warranty on printers bought before 30th September, which makes this a fine choice for home users.

✓ Extremely affordable; compact; simple; good warranty

✗ No upgrades; low-capacity toners; crumples envelopes

SPECIFICATIONS Colour laser, 600dpi, 20ppm mono/5ppm colour maximum speed, USB Hi-Speed interface. **Part code** 5250220-200



SAMSUNG CLP-510

RATING ★★★★★

PRICE £226 inc VAT

SUPPLIER www.savastore.com

DETAILS www.samsung.co.uk

We first reviewed Samsung's CLP-510 in *What's New, Shopper* July 2005 when it impressed us with its comprehensive paper handling. It's the only printer on test with duplex printing as standard. It also has a separate paper cassette and 100-sheet multipurpose tray.

At 32kg, the Samsung is the heaviest printer in this group. The CLP-510 is not too complicated to set up. It has the largest footprint, and accessing the paper inputs and toner drawer requires extra clearance at the front and sides. The supplied toners have a generous capacity for a budget printer, and an optional 7,000-page black supply is available.

Each toner drops easily into its own slot, but the other consumables are preinstalled. Extracting a devilish piece of sticking tape from the 250-sheet cassette was the only part of the installation that had us swearing.

The CLP-510 has a higher colour speed rating than the other four-pass printers, and it narrowly outpaced them in our mixed-colour test. It was faster than average when printing black text, but all printing was accompanied by a throbbing sound from one of its fans.

We weren't impressed with its print quality. Black text had a soft outline, making it a little taxing to read, particularly at smaller font sizes. Photos and business graphics showed some coarse dithering even at the driver's Best quality setting. We noticed that Samsung's toners produced graphics with a strictly matt finish, which made them look flat compared to those produced by some of the other printers.

VERDICT

The CLP-510 provides lots of features for the money and performs reasonably well, too. However, it's big, heavy and noisy, and could be hard to accommodate in the home. It isn't a bad printer, but its excellent paper handling and decent speed are offset by below-average print quality across the board.

✓ Affordable; great paper handling

✗ Large; soft text outlines; disappointing print quality

SPECIFICATIONS Colour laser, 600dpi, 24ppm mono/6ppm colour maximum speed, USB Hi-Speed interface. **Part code** CLP-510/XEU



EPSON AcuLaser C1100

RATING ★★★★★

PRICE £229 inc VAT

SUPPLIER www.misco.co.uk

DETAILS www.epson.co.uk



Epson's AcuLaser C1100 has enjoyed a place on our Hotlist (see page 26) since we reviewed it in *What's New, Shopper* April 2005. As our current favourite, we wanted to see how it fared against the latest competition.

It's not as big or heavy as the Samsung CLP-510, but the C1100's tall multipurpose tray makes it seem imposing. Epson has softened the impression of size with some rounded edges, but this printer is still much bigger than either Konica Minolta on test. It's harder to set up, too: the drum comes in place, but the four toners must be fitted before it's ready to print.

Despite its size, the Epson's multipurpose tray stores only 180 sheets of paper. This gives it the most limited standard paper handling of any printer here, but a duplex unit and 500-sheet cassette are available. Paper orientation is marked, but there's no such guide for envelopes and the AcuLaser crumples them.

Printing in black, the Epson is the fastest printer here, delivering both our text tests at 23.8 pages per minute (ppm). When it was ready to print, its nine-second time-to-first-page was the quickest, and warming up from sleep added only 21 seconds to this time.

The C1100's greatest strength is its excellent print quality. It produces black text with pin-sharp outlines and the driver's Fine setting removes any trace of blockiness. This printer's fine shading control helps it produce the best greyscale and colour photographs we've seen from a laser printer. Graphics and photos benefit further from the toner's uniform satin finish.

VERDICT

It's a shame the C1100 doesn't come with higher capacity toners or a second paper tray, but it's hard to fault its superb print quality and below-average ownership costs. It isn't the fastest colour printer here, but we'd happily wait for its superior results.

✓ Great print quality; fast, particularly in mono

✗ Limited paper handling; setup a little complicated

SPECIFICATIONS Colour laser, 600dpi, 25ppm mono/5ppm colour maximum speed, USB Hi-Speed and parallel interfaces. **Part code** C11C567001DC



HP Color LaserJet 2600n

RATING ★★★★★

PRICE £240 inc VAT

SUPPLIER www.misco.co.uk

DETAILS www.hp.co.uk

The LaserJet 2600n is currently one of the most affordable colour lasers, costing only £46 more than the cheapest printer in our group. Unlike most entry-level lasers, though, it has a network port and prints full colour in a single pass.

This probably sounds great if you're printing in colour, where the HP system's 8ppm quoted speed would compare well to the four-pass competition. However, it's a drag when printing pages in black and white. The 2600n delivered both our mono text tests at just 7.7ppm. This is easily the slowest performance that we've recorded from a laser printer.

We weren't overwhelmed by this printer's colour performance, either. It outpaced most of the four-pass printers, but Samsung's CLP-510 edged ahead in our mixed-colour test and Epson's AcuLaser was far quicker when printing photographs. Only the 2600n's very fast warm-up time stands out from the competition, so it might prove faster if your print jobs are mostly infrequent and short.

The 2600n's text printing is very good, even at the driver's draft setting. It's also capable of printing decent greyscale images. Unfortunately, our black-and-white photograph had a strong reddish colour cast until we forced it to print in grey only. Colour graphics were reasonable, but the printer's slightly grainy photographs were subject to a warm brown bias that made them look aged.

The LaserJet printer takes only four consumables so it's easy to maintain, but its running costs are high. When we first reviewed the 2600n we expected the consumables to drop significantly in price. It's a big disappointment that they haven't.

VERDICT

This affordable printer is compact, easy to set up and maintain. It has acceptable paper handling and print quality, but it is tediously slow when printing in mono, and each page is expensive.

✓ Fast warm-up; good value to buy; fairly quick in colour; good text quality

✗ Glacial mono printing; expensive to run; unexceptional colour print quality

SPECIFICATIONS Colour laser, 600dpi, 8ppm maximum speed, USB Hi-Speed and 10/100 Ethernet interfaces. **Part code** Q6455A



OKI C3200

RATING ★★★★★

PRICE £247 inc VAT

SUPPLIER www.savastore.com

DETAILS www.oki.co.uk

Oki's C3200 has no network connection, but like HP's LaserJet 2600n it has a single-pass print engine. It's a much quicker printer than the HP; Oki says it can print 20ppm in mono and 12ppm in colour.

The C3200 is one of the biggest printers in this test. Although it's quite low and not especially wide, it's very deep. This helps provide room within the printer for its four image drums, and allows a comparatively straight paper path. You'll need a deep place to site it, though, particularly if you want to use the 100-sheet straight-path output at the rear.

The Oki system's paper input is similarly flexible. Like the more expensive C5250n, the C3200 can print on sheets of paper up to 1.2 metres long. Its generous 300-sheet input cassette is supplemented by a 100-sheet multipurpose tray, though this can be awkward to extend and retract. Envelope and paper orientations are marked clearly, and it prints envelopes without crumpling them.

In mono text tests, the C3200 lagged behind most of the four-pass printers, but when printing in colour it was the fastest device on test. It delivered our mixed-colour document at 10ppm, which is by far the quickest performance we've timed from such an affordable printer.

The C3200's text is particularly sharp, and even minuscule two-point characters look clear under magnification. We were disappointed with its graphical output, though. Our greyscale photograph had a pink tone, and reprinting it in mono showed some coarse dithering. This was also visible in colour graphics, which were markedly inferior to the best on display.

VERDICT

The C3200 is impressively fast when printing in colour, but most of the other printers in our review produced better print quality. It may be fast for the money, but its high running costs mean it isn't a bargain overall.

✓ Fast colour printing; flexible paper handling; great mono text

✗ High running costs; poor graphics quality

SPECIFICATIONS Colour laser, 1,200x600dpi, 20ppm mono/12ppm colour maximum speed, USB Hi-Speed interface. **Part code** 01153001



DELL Laser Printer 3100cn

RATING ★★★★★

PRICE £340 inc VAT

SUPPLIER Dell 08709 075818

DETAILS www.dell.co.uk

Dell's 3100cn uses a four-pass engine, but its specification is otherwise very impressive. It has a range of interfaces, supports multiple print languages, including PostScript 3, and sits on a 250-sheet input cassette.

Setting it up is potentially complex, as you must lift it on to its paper cassette and install four toners. The toners appear identical to those of the Epson C1100, but Dell ships full-capacity units with the 3100cn. Even inexperienced users should find setup possible with help from the clear instruction card, but the bamboozled or timid can have Dell install it for £46.

Dell's installation program offers several options for controlling colour use on an office network, including a mono-only driver and password-protected colour. Installing the PostScript driver is optional.

We ran our first set of tests using the PCL driver. The Dell's mono performance was almost identical to the Epson's, though the 3100cn was slightly slower to print its first page. But we experienced problems when printing in colour, with our mixed-colour document taking nearly a minute more than the C1100 did. We repeated the test using the PostScript driver, bringing the Dell's time to within 25 seconds.

Some high-resolution tests produced more significant problems, with the Dell failing to print using either driver's High Quality setting. They printed using the High Speed setting, but long processing times made this a bit of a misnomer, and colour reproduction was inaccurate.

VERDICT

The 3100cn is well specified and by far the cheapest of these printers to run. It's fast in mono and has high print quality across the board, provided it's able to complete the job. It's a good choice for mono and colour printing in a small workgroup, but we wouldn't recommend it for complex graphical jobs.

✓ Low ownership costs; fast mono printing; several paper inputs

✗ Big and boxy; failed to print some high-resolution tests

SPECIFICATIONS Colour laser, 600x600dpi, 25ppm mono/5ppm colour maximum speed, USB Hi-Speed, 10/100 Ethernet and parallel interfaces.



KONICA MINOLTA Magicolor 2450

RATING ★★

PRICE £435 inc VAT

SUPPLIER www.misco.co.uk

DETAILS www.konicaminoltaprinters.co.uk

Aside from its grey top and covered paper tray, this Konica Minolta looks identical to the Magicolor 2400W reviewed on page 172. It shares the same print speed, resolution and paper-handling capabilities, but costs more than twice as much. The extra outlay buys several important upgrades, including a network interface, multiple print languages and higher-capacity toners.

The 2450 is as easy to set up as the 2400W, but doesn't share all its limitations. Its generous 128MB of memory can be upgraded to a whopping 640MB, and buying a 500-sheet paper cassette will increase its paper capacity to 700 sheets. At this price, however, we'd expect more than a 200-sheet multipurpose tray as standard. Like its more affordable brother, the 2450 creases envelopes and offers no guide on how they should be oriented.

The 2450 printed our 50-page document test at 18.8ppm, which is no better than many cheaper printers. By default it printed each copy of our mono letter with four passes at just 4.8ppm. Repeating the test with the driver forced to use only black increased its speed to 18.6ppm.

The PostScript driver's spool time for our mixed-colour document was just six seconds, but the 2450 processed the job slowly. It paused regularly between pages, and its speed of just 1.9ppm was slower than any other printer here.

Print quality was OK, but colours in photos seemed washed out. Some blue PowerPoint slides in our mixed-colour test were printed as violet, with a dark band on the right-hand side.

VERDICT

The 2450 adds some welcome features to the 2400W's basic specification, but it isn't an entry-level printer. Considering the faster Dell 3100cn has better paper handling, costs £100 less and is cheaper to run, this Konica Minolta isn't such good value.

✓ Compact; reasonable mono running costs; decent print quality

✗ Slow colour printing; basic paper handling; expensive

SPECIFICATIONS Colour laser, 600x600dpi, 20ppm mono/5ppm colour maximum speed, USB Hi-Speed, 10/100 Ethernet and parallel interfaces. Part code 5250222-200



OKI C5250n

RATING ★★

PRICE £465 inc VAT

SUPPLIER www.misco.co.uk

DETAILS www.oki.co.uk

Oki's C5250n seems almost identical to the more affordable C3200, but it is actually faster and has a network interface. Both printers have useful paper-handling abilities as standard, but only the C5250n can be upgraded with a further 530-sheet input cassette.

This printer ships with higher-capacity supplies than the C3200, and 5,000-page replacement toners are available compared to just 3,000 for the C3200. This, and the slightly longer life of the C5250n's drums, give you more reasonable running costs. Both Oki printers require more maintenance than the others in the group: printing 50,000 pages will require the replacement of 10 consumables at least once.

Like all Oki's laser-class printers, the C5250n creates page images on its drums using multiple LED sources rather than laser light. Oki says that this is more reliable as it involves fewer moving parts, and that it allows high-resolution printing at higher speeds. As with the C3200, this printer produced superbly sharp and accurate black text, but we were underwhelmed by the quality of its prints in our graphic tests.

Given this printer's higher speed ratings, we were surprised that it failed to outpace the C3200 in our print tests. Its time-to-first-page on our letter test was significantly quicker, but long page-preparation times made it much slower when printing test photos. It was one of the noisiest printers in the group, with loud fans and a clunking sound when picking each sheet of paper from the cassette.

VERDICT

The C5250n costs over £200 more than the C3200, but despite its higher specification it performed similarly in all our tests. If you intend to use it heavily, its lower running costs will make it cheaper in the long run. Otherwise, it does too little for the money.

✓ Reasonable running costs; high duty cycle; great mono text

✗ Expensive; poor graphics quality; unimpressive speed

SPECIFICATIONS Colour laser, 1,200x600dpi, 24ppm mono/20ppm colour maximum speed, USB Hi-Speed and 10/100 Ethernet interfaces. Part code 01161601



XEROX Phaser 8500AN

RATING ★

PRICE £532 inc VAT

SUPPLIER www.dabs.co.uk

DETAILS www.xerox.co.uk

Like the two Oki printers, this Xerox doesn't contain a laser. Its solid-ink system works by heating pellets of waxy ink until they liquefy. Melted ink is applied to a rotating drum through the nozzles of a print head, then transferred to paper where it solidifies immediately.

Solid ink comes with minimal packaging, reducing waste, and slots directly into the Phaser. The printer is simple to set up, but took over 15 minutes to prepare itself for its first print. Xerox recommends that the device is left switched on, but even from its sleeping state it took over five minutes to print a single page of colour text.

In our first tests, the driver's default Enhanced quality setting was surprisingly slow, so we switched to Fast Colour for our 50-page document test. We were shocked by the results; they were acceptable for a draft, but they had rough edges as if from an inkjet printer.

At the higher-quality setting necessary for our letter test, the Xerox slowed to just 12.4ppm. Characters improved, but with soft, shabby outlines they were still worse than from any other printer in this test.

Prints from the Phaser have a thick, waxy lustre that makes them look glossy and professional, but the printer's graphical output is otherwise poor. Colour photos looked superb from a distance, but colour dots were evident from a normal viewing range. Greyscale images looked OK from afar, but colour artefacts were visible from within two feet. Printed in grey only they were dingy, with coarse grain. Graphics and colour text were similarly grainy.

VERDICT

Xerox's solid-ink system delivers a commendable reduction in waste, but the Phaser 8500 fails to provide the quality we'd expect from a laser-class printer. It is expensive, has above-average mono running costs, and seven of the other printers on test produce quality black text faster.

✓ Produces very little waste; high duty cycle

✗ Expensive; very disappointing print quality; speed figures are optimistic

SPECIFICATIONS Colour solid-ink printer, 1,200x1,200dpi, 24ppm maximum speed, USB Hi-Speed and 10/100 Ethernet interfaces. Part code 8500_AN



MANUFACTURER	KONICA MINOLTA	SAMSUNG	EPSON	HP	OKI	DELL	KONICA MINOLTA	OKI	XEROX
Model	Magicolor 2400W	CLP-510	AcuLaser C1100	Color LaserJet 2600n	C3200	Laser Printer C3100cn	Magicolor 2450	C5250n	Phaser 8500AN
Rating	★★★★	★★★	★★★★★	★★★	★★★	★★★★	★★	★★	★
QUOTED SPEEDS									
Quoted speed, mono A4	20ppm	24ppm	25ppm	8ppm	20ppm	25ppm	20ppm	24ppm	24ppm
Quoted speed, colour A4	5ppm	6ppm	5ppm	8ppm	12ppm	5ppm	5ppm	20ppm	24ppm
Quoted warm-up time	49s	1m 39s	37s	0s	1m 30s	Not stated	49s	1m 30s	12m power on, 4m from sleep
Quoted time to first page, mono	12s	13s	9s	20s	9s	9s	12s	9s	6s
Quoted time to first page, colour	21s	21s	17s	20s	14s	17s	21s	13s	6s
Total quoted time to first print, mono	1m 01s	1m 52s	46s	20s	1m 39s	Not stated	1m 01s	1m 39s	4m 06s
Total quoted time to first print, colour	1m 10s	2m 00s	54s	20s	1m 44s	Not stated	1m 10s	1m 43s	4m 06s
TESTED SPEEDS									
First mono page from sleep	52s	31s	30s	24.5s	57s	29.5s	48s	1m 11s	1m 00s
First colour page from sleep	1m 02s	1m 35s	38.5s	24.5s	1m 11s	40s	58s	1m 20s	5m 37s
Test 1 (50-page text doc)	2m 51s (17.5ppm)	2m 14s (22.4ppm)	2m 06s (23.8ppm)	6m 30s (7.7ppm)	2m 46s (18.1ppm)	2m 07s (23.6ppm)	2m 40s (18.8ppm)	2m 47s (18ppm)	2m 12s (22.7ppm)
Test 2 (letter), time to first page	13.5s	12s	9s	25s	28s	11s	14.5s	17.5s	8.5s
Test 2 (letter), total time for 50 copies	2m 40s (18.8ppm)	2m 14s (22.4ppm)	2m 06s (23.8ppm)	6m 30s (7.7ppm)	2m 54s (17.2ppm)	2m 08s (23.4ppm)	2m 41s (18.6ppm)	2m 44s (18.3ppm)	4m 02s (12.4ppm)
Test 3 (mixed colour)	5m 13s (4.6ppm)	4m 21s (5.5ppm)	4m 53s (4.9ppm)	4m 24 (5.5ppm)	2m 24s (10ppm)	5m 16s (4.5ppm)	12m 32s (1.9ppm)	2m 26s (9.9ppm)	2m 53s (8.3ppm)
Test 4 (10x8" photos)	46s	1m 23s	38.5s	1m 13s	42.5s	1m 02s	1m 39s	1m 32s	40s
Test 5 (6x4" photos)	54.5s	2m 00s	53s	1m 14s	47s	54.5s	2m 02s	1m 21s	53.5s
PHYSICAL AND ENVIRONMENTAL									
Standard interfaces	USB Hi-Speed	USB Hi-Speed	USB Hi-Speed, parallel	USB Hi-Speed, 10/100 Ethernet	USB Hi-Speed	USB Hi-Speed, 10/100 Ethernet, parallel	USB Hi-Speed, 10/100 Ethernet, parallel	USB Hi-Speed, 10/100 Ethernet	USB Hi-Speed, 10/100 Ethernet
Dimensions (HxWxD)	341x430x395mm	405x510x470mm	439x445x445mm	370x407x453mm	342x400x528mm	533x424x419mm	341x430x395mm	342x400x528mm	368x406x534mm
Weight	20kg	32kg	28kg	18.4kg	20kg	31.5kg	20kg	20kg	28kg
Noise	53dB(A)	50dB(A)	53dB(A)	47dB(A)	52dB(A)	63dB(A)	53dB(A)	54dB(A)	54dB(A)
Duty cycle (per month)	35,000 pages	35,000 pages	45,000 pages	35,000 pages	35,000 pages	45,000 pages	35,000 pages	50,000 pages	85,000 pages
Power consumption, printing	250W standby, 1,100W peak	450W	176W average, 782W max	190W	420W average, 950W peak	340W	250W standby, 1,100W peak	420W average, 950W peak	230W average, 1,500W peak
Power consumption, sleep mode	27W	30W	16W	12W	25W	82W (standby)	27W	25W	43W
PAPER HANDLING									
Maximum paper size	A4/Legal	A4/Legal	A4/Letter	A4/Legal	A4/Legal/custom to 1.2M	A4/Legal	A4/Legal	A4/Legal/custom to 1.2M	A4/Legal
Maximum paper weight	163gsm	163gsm	210gsm	220gsm	203gsm	216gsm	163gsm	203gsm	220gsm
Standard paper inputs (capacity)	1 (200)	2 (350)	1 (180)	1 (250) plus manual feed	2 (400)	2 (400)	1 (200)	2 (400)	2 (625)
Max paper inputs (capacity)	1 (200)	3 (850)	2 (680)	2 (500) plus manual feed	2 (400)	3 (900)	2 (700)	3 (930)	4 (1,675)
Output tray capacity	200 sheets	250 sheets	250 sheets	125 sheets	250, 100 straight path	250 sheets	200 sheets	250, 100 straight path	300 sheets
Duplex	N/A	Yes	£155	N/A	N/A	£187	£192	£130	N/A
GENERAL									
Technology	Four-pass colour laser	Four-pass colour laser	Four-pass colour laser	Single-pass colour laser	Single-pass colour LED	Four-pass colour laser	Four-pass colour laser	Single-pass colour LED	Single-pass solid ink
Maximum resolution	600x600dpi	600x600dpi	600x600dpi	600x600dpi	1,200x600dpi	600x600dpi	600x600dpi	1,200x600dpi	1,200x1,200dpi
Language(s)	Host-based	Host-based	Host-based	Host-based	Host-based	PCL 5e, PCL6, PS3	PCL 5e, PCL 5c, PCL 6, PS3	Host-based	PCL 5c, PS3
Supported operating systems	Win 98/Me/2000/XP	Win 98/Me/2000/XP/Server 2003, Mac OS X 10.3.x	Win 98/Me/NT4/2000/XP/Server 2003, Mac OS 9.x+, OS X 10.1.2+	Win 98/Me/2000/XP/Server 2003, Mac OS X 10.2+	Win 98/Me/2000/2000/Server/XP	Win 98/Me/NT4/2000/XP	Win 98/Me/NT4/2000/XP/Server 2003, Mac OS 9, OS X 10.2+	Win 98/Me/2000/2000/Server/XP	Win 98/Me/NT4/2000/XP/Server 2003, Mac OS 9.x/10.2+
Memory, standard (max)	32MB (32MB)	64MB (192MB)	32MB (256MB)	16MB (16MB)	32MB (288MB)	64MB (576MB)	128MB (640MB)	96MB (288MB)	128MB (256MB)
Other features and options	Warranty upgrade to three years					Home installation £46; free recycling of old printer	Free toner if purchased before 30/9/05; warranty upgrade to three years		
PRICE AND WARRANTY									
Street price inc VAT	£194	£226	£229	£240	£247	£340	£435	£465	£532
Price per mono A4 page	1.48p	1.66p	1.58p	2.07p	1.88p	1.06p	1.48p	1.51p	1.81p
Price per colour A4 page	7.75p	7.86p	7.68p	8.46p	9.44p	5.43p	7.75p	7.40p	7.24p
Price second paper cassette	N/A	£210	£163	£108	N/A	£163	£192	£166	£378
Capacity of supplied black toner (pages)	1,500	3,000	1,500	2,500	1,500	4,000	4,500	3,000	1,000
Capacity of supplied colour toners (pages)	1,500	2,000	1,500	2,000	1,500	4,000	4,500	3,000	1,000
Drum capacity (pages)	45,000/11,250 (colour)	50,000/12,500 (colour)	42,000/10,500 (colour)	Renewed with toners	14,000 per colour	42,000/10,500 (colour)	45,000/11,250 (colour)	17,000 per colour	Lifetime
Estimated ownership cost, three years' light use	£250	£226	£278	£240	£278	£334	£435	£465	£793
Estimated ownership cost, three years' medium use	£1,136	£1,295	£1,125	£1,279	£1,161	£920	£1,377	£1,247	£1,459
Estimated ownership cost, three years' heavy use	£3,963	£4,094	£4,114	£4,732	£4,806	£3,031	£4,204	£4,056	£4,385
Warranty duration and terms	One year onsite	One year onsite	One year onsite	One year RTB	One year onsite	One year next business day onsite	One year onsite	One year onsite	One year onsite
Supplier	www.misco.co.uk	www.savastore.com	www.misco.co.uk	www.misco.co.uk	www.savastore.com	Dell 08709 075818	www.misco.co.uk	www.misco.co.uk	www.dabs.com
Details	www.konicaminolta.com	www.samsung.com	www.epson.co.uk	www.hp.co.uk	www.oki.co.uk	www.dell.co.uk	www.konicaminolta.com	www.oki.co.uk	www.xerox.co.uk
Manufacturer part code	5250220-200	CLP-510/XEU	C11C567001DC	Q6455A	01153001	N/A	5250222-200	01161601	8500_AN

LABS VERDICT COLOUR LASER PRINTERS

When prices are so low, it's tempting to assume that entry-level colour lasers must be basic or slow, but our tests show that they actually give more expensive models a run for their money. The three most affordable models in this group are no costlier to own in the long term than the three most expensive.

Konica Minolta's 2400W is the first colour laser printer we've seen for less than £200. It's quite basic and cannot be upgraded, but its compact size and decent print quality make it ideal for the home. Unusually for a budget printer, it's also comparatively cheap to run. Konica

Minolta is currently offering it with a three-year onsite warranty. It wins our Best Budget Buy award.

If running costs are a priority, Dell's C3100cn is ideal. It's fast, produces decent prints and is well specified. It costs more than the cheapest printers here, but Dell's low consumable prices – which include delivery – make it the cheapest to own. Epson's AcuLaser C1100 just pips it to our Best Buy award, however. The AcuLaser isn't as cheap to run, but it shares many of the Dell's strengths and had no problems with high-resolution prints. Its excellent all-round print quality lifts it above the competition. **CS**

KONICA MINOLTA 2400W



EPSON AcuLaser C1100

